I. Amendment to the Claims

Please cancel claims 18-25 and 31-33 without prejudice or disclaimer.

Please add the following new claims.

--34. An amplification reaction mixture for the quantitation of a target nucleic acid segment in a biological sample, said reaction mixture comprising:

said target nucleic acid;

a predetermined initial amount of a control sequence for quantitation of a target nucleic acid, wherein said control sequence binds the same primers as are bound by said target nucleic acid segment; and

an oligonucleotide primer pair wherein said primer pair can serve to amplify said control sequence and said target nucleic acid, wherein following amplification said control sequence and target amplified nucleic acid segments are distinguishable by size.

35. A reverse transcription reaction mixture for reverse transcribing a target mRNA suspected of being present in a biological sample, said reaction mixture comprising a predetermined initial amount of a control sequence cRNA, a target RNA, and a target-specific primer for initiating cDNA synthesis, wherein said primer can serve to initiate reverse transcription of a nucleic acid segment contained within said control sequence cRNA together with a segment contained within the particular target nucleic acid, and wherein said control sequence is further distinguished by having a hybridization site identical in sequence to a hybridization site in said target nucleic acid, whereby following reverse transcription the resulting target and control sequence cDNAs can serve as templates for amplification for

providing control sequence and target amplified nucleic acid segments which are distinguishable by size.

36. A kit for the quantitation of a target nucleic acid segment in a biological sample comprising individual containers which provide:

a predetermined initial amount of a control sequence for quantitation of a target nucleic acid wherein said control sequence binds the same primers as are bound by said target nucleic acid segment; and

an oligonucleotide primer pair wherein said primer pair can serve to amplify said control sequence and said target nucleic acid.

37. A plasmid for use as an internal control for quantitation of a target nucleic acid sequence contained within a sample which plasmid comprises:

a control sequence comprising two sequences which provide primer hybridization sites in said plasmid which primer hybridization sites are identical to primer hybridization sites within said target nucleic acid sequence such that a primer pair will function in a PCR reaction to amplify said control sequence and said target nucleic acid segment, wherein upon amplification said control sequence and said target segments can be distinguished by size.

38. The mixture of claim 34, wherein the control sequence is a maxigene.

39. The mixture of claim 35, wherein the control sequence is a maxigene.

40. The kit of claim 36, wherein the control sequence is a maxigene.

41. The plasmid of claim 37, wherein the control sequence is a maxigene.

42. The mixture of claim 34, wherein the target nucleic acid is contained within a nucleic acid sequence which encodes a protein associated with HIV or HCMV.